

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A vibration correcting optical device, comprising:

a vibration detection unit that detects a vibration of the vibration correcting optical device and outputs a vibration detection signal corresponding to the vibration;

a vibration state judgment unit that judges a state of the vibration of the vibration correcting optical device to be one of at least three states, based upon the vibration detection signal;

an image vibration correcting optical system that corrects an image vibration caused by the vibration of the vibration correcting optical device;

a drive unit that drives the image vibration correcting optical system based upon a drive signal;

a drive signal arithmetic operation unit that calculates the drive signal based upon the vibration detection signal and outputs the drive signal to the drive unit; and

a drive signal calculation control unit that controls a method for calculating the drive signal adopted at the drive signal arithmetic operation unit in conformance to the state of the vibration ascertained through a judgment executed by the vibration state judgment unit.

2. (Original) A vibration correcting optical device according to claim 1, further comprising:

a reference value calculation unit that obtains through an arithmetic operation a reference value to be used as a reference in processing the vibration detection signal based upon the vibration detection signal, wherein:

the vibration state judgment unit judges the state of the vibration of the vibration correcting optical device based upon the vibration detection signal and the reference value; and

the drive signal arithmetic operation unit calculates the drive signal based upon the vibration detection signal and the reference value.

3. (New) A vibration correcting optical device according to claim 1, wherein:

the drive signal arithmetic operation unit comprises a low pass filter having a cutoff frequency through which the vibration detection signal passes; and

the drive signal calculation control unit sets the cutoff frequency according to the state judged by the vibration state judgment unit.

4. (New) A vibration correcting optical device according to claim 3, wherein:

the vibration state judgment unit judges the state of the vibration to be one of a normal vibration state, a first abnormal vibration state and a second abnormal vibration state; and

the drive signal calculation control unit sets the cutoff frequency in the normal vibration state lower than at least one of the cutoff frequency in the first abnormal vibration state and the cutoff frequency in the second abnormal vibration state.

5. (New) A vibration correcting optical device, comprising:

a vibration detection unit that detects a vibration of the vibration correcting optical device and outputs a vibration detection signal corresponding to the vibration;

a vibration state judgment unit that judges a state of the vibration of the vibration correcting optical device;

an image vibration correcting optical system that corrects an image vibration caused by the vibration of the vibration correcting optical device;

a drive unit that drives the image vibration correcting optical system based upon a drive signal;

a drive signal arithmetic operation unit that calculates the drive signal based upon the vibration detection signal and outputs the drive signal to the drive unit;

a drive signal calculation control unit that controls a method for calculating the drive signal adopted at the drive signal arithmetic operation unit in conformance to the state of the vibration ascertained through a judgment executed by the vibration state judgment unit; and

a reference value calculation unit that obtains through an arithmetic operation a reference value to be used as a reference in processing the vibration detection signal based upon the vibration detection signal, wherein:

the drive signal calculation control unit sets a number of sets of sampling data of the vibration detection signal according to the state judged by the vibration state judgment unit.

6. (New) A vibration correcting optical device according to claim 5, wherein:

the vibration state judgment unit judges the state of the vibration to be one of a normal vibration state and an abnormal vibration state; and

the drive signal calculation control unit sets the number of sets of sampling data of the vibration detection signal in the normal vibration state larger than the number of sets of sampling data of the vibration detection signal in the abnormal vibration state.